

Easements

SEE: Use authorizations, or refer to the purpose of the easement.

Ecological functions

SEE: Environmental protection.

Endangered Species Act

Discussion on Endangered Species Act

The Endangered Species Act (ESA) is a federal law triggered when the population of a species declines to a critical condition. The National Marine Fisheries Service and the United States Fish and Wildlife Service share responsibility for administering the ESA. The agencies go through a multi-step process to first determine whether a species is at risk, whether to list the species as "threatened" or "endangered," and whether to adopt regulations to prevent the take of the species. Along the way are other steps involving consultation with federal agencies or negotiations with various entities over habitat conservation plans.

The ESA prohibits anyone from directly killing an endangered or threatened species or harming the species or its habitat. Anyone who knowingly violates this prohibition is subject to penalties, including civil penalties up to \$25,000 for

each violation and criminal penalties of up to one year imprisonment, a \$100,000 fine, or both.

The obligation of the department is to abide by the rules and regulations implementing the ESA. This means that the department, like all land owners and managers, must carefully scrutinize its actions to assure that the liability to the state is minimized or adequately managed. The department should minimize risk of ESA violations even in the absence of adopted rules describing specific acceptable or unacceptable activities affecting endangered species. SEE ALSO: Environmental protection.

Activities on state-owned aquatic lands could be limited or curtailed by the listing of a species. Recent fish listings across the state may result in limitations or restrictions on state-owned aquatic lands, such as severely curtailing the number of permissible outfalls in a given area, the number of docks or piers, or construction of bridges and other structures in the water. All commercial leases and easements, including outfall easements, contaminated sediment cleanup, Port Management Agreements, and sand and gravel contracts must comply with any ESA guidelines adopted by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. Again, the department should not wait for the regulations to be adopted, but should seek to anticipate federal requirements and build them into any use authorization issued for state-owned aquatic lands. SEE ALSO: Commercial and industrial uses: Outfalls: Sediments; Ports and port management agreements; Sand and gravel.

As the federal guidelines are being developed, the department has the opportunity to provide feedback and written comment to the federal agencies. Such comments must be coordinated with the Division Manager and Executive Management. Once the take guidelines are issued, it is the responsibility of state-owned aquatic lands managers to see they are adhered to.

Prior to the issuance of take guidelines, the department needs to minimize exposure, including anticipating federal restrictions and incorporating them into use authorizations and requiring consultation between a project proponent and the relevant federal agency with responsibility over the listed species. Staff should take a conservative approach, and should err on the side of protecting the resources when commenting on environmental documents or when evaluating whether to issue a use authorization.

Environmental protection

RCW 79.90.455: Aquatic lands--Management guidelines.

The management of state-owned aquatic lands shall be in conformance with constitutional and statutory requirements. The manager of state-owned aquatic lands shall strive to provide a balance of public benefits for all citizens of the state. The public benefits provided by aquatic lands are varied and include:

- (1) Encouraging direct public use and access;
- (2) Fostering water-dependent uses;
- (3) Ensuring environmental protection;
- (4) Utilizing renewable resources. Generating revenue in a manner consistent with subsections (1) through (4) of this section is a public benefit.

RCW 79.90.460: Aquatic lands--Preservation and enhancement of water-dependent uses--Leasing authority.

(3) The department shall consider the natural values of state-owned aquatic lands as wildlife habitat, natural area preserve, representative ecosystem, or spawning area prior to issuing any initial lease or authorizing any change in use. The department may withhold from leasing lands which it finds to have significant natural values, or may provide within any lease for the protection of such values.

WAC 332-30-100: Introduction.

- (2) Management methods. To achieve the above, state-owned aquatic lands will be managed particularly to promote uses and protect resources of state-wide value.
 - (a) Planning will be used to prevent conflicts and mitigate adverse effects of proposed activities involving resources and aquatic land uses of state-wide value. Mitigation shall be provided for as set forth in WAC 332-30-107(6).
 - (b) Areas having unique suitability for uses of state-wide value or containing resources of state-wide value may be managed for these special purposes. Harbor areas and scientific reserves are examples. Unique use requirements or priorities for these areas may supersede the need for mitigation.
 - (c) Special management programs may be developed for those resources and activities having state-wide value. Based on the needs of each case, programs may prescribe special management procedures or standards such as lease auctions, resource inventory, shorter lease terms, use preferences, operating requirements, bonding, or environmental protection standards.

WAC 332-30-122: Aquatic land use authorization.

Subsection (2) of this section (except subsection (2)(a)(iii) and (b)(iii) of this section), subsections (3)(a), and (4)(a) shall apply to port districts managing aquatic lands under a management agreement (WAC 332-30-114).

- (2) Application review. In addition to other management considerations, the following special analysis shall be given to specific proposed uses:
 - (a) Environment.
 - (i) Authorization instruments shall be written to insure that structures and activities on aquatic lands are properly designed, constructed, maintained and conducted in accordance with sound environmental practices.
 - (ii) Uses which cause adverse environmental impacts may be authorized on aquatic lands only upon compliance with applicable environmental laws and regulations and appropriate steps as may be directed are taken to mitigate substantial or irreversible damage to the environment.

(iii) Nonwater-dependent uses which have significant adverse environmental impacts shall not be authorized.

WAC 332-30-134: Aquatic land environmental protection.

- (1) Planning. Coordinated, interagency planning will be encouraged to identify and protect natural resources of state-wide value.
- (2) Reliance on other agencies. Aquatic land natural resources of state-wide value are protected by a number of special state and federal environmental protection programs including: State Shorelines Management Act, Environmental Policy Act, Hydraulics Project Approval, National Environmental Policy Act, Federal Clean Water Act, Fish and Wildlife Coordination Act and section 10 of the Rivers and Harbors Act. Governmental agencies with appropriate jurisdiction and expertise will normally be depended on to evaluate environmental impacts of individual projects and to incorporate appropriate protective measures in their respective project authorizations.
- (3) Method. Leases and other proprietary aquatic land conveyances may include environmental protection requirements when:
 - (a) Regulatory agencies' approvals are not required;
 - (b) unique circumstances require long-term monitoring or project performance; or
 - (c) substantial evidence is present to warrant special protection.

Discussion on environmental protection

"Ensuring environmental protection" is one of the key public benefits of state-owned aquatic lands that the department must strive to provide. SEE ALSO: Public benefits.

In addition, of all the things the department may wish to consider before granting a use authorization, the only qualities of state-owned aquatic lands the department is mandated by statute to consider are "natural values." After considering these natural values, the department has clear authority to protect them, by either withholding lands from leasing or requiring conditions necessary for their protection

within a lease. As part of ensuring environmental protection, the department can and will strongly protect the natural values of state-owned aquatic lands through leasing decisions. SEE ALSO: Reserves, aquatic; Use authorizations.

Ensuring environmental protection — while also encouraging public use, fostering water-dependent uses, and providing for other public benefits — requires a shift in the department's thinking from site-by-site decisions to a broader context. Site-by-site decisions about state-owned aquatic lands must always be made in the context of the larger ecosystem. For example, two keys to protecting and restoring ecosystems are retaining their capacity to recover from natural disturbances and maintaining the connections between and among functioning habitats.

Only by defining and addressing the entire ecosystem can one make the important linkages between department decisions and the long-term direct and indirect effects of those decisions. With this perspective, even some cases of seemingly "insignificant" adverse environmental impacts from proposed uses will be recognized as unacceptable if they contribute to the continuing degradation of the larger ecosystem. The department will not authorize these proposed uses. To do otherwise will fail to meet the department's goal to ensure environmental protection in the broadest sense.

For example, great attention has focused recently on several threatened or endangered salmonid populations. There are 18 additional marine species in Puget Sound, plus bull trout populations in Washington rivers, also petitioned for listing under the Endangered Species Act. Because of the Endangered Species Act listings, the department, like every other land owner or manager in the Pacific Northwest, must consider the direct and indirect impacts of all of its decisions on listed salmon populations. The most direct control the department has over impacts to salmonids is regarding the loss or alteration of nearshore vegetated nursery habitats, and the loss or degradation of spawning habitats. If the

department knowingly or carelessly causes or allows harm to salmon or to the habitat necessary for any salmon life-stage, it is not best ensuring environmental protection and also it might be found liable and suffer major legal penalties. SEE ALSO: Endangered Species Act.

The keys to addressing environmental concerns are to:

- Address environmental concerns early.
- Follow all applicable procedures and regulatory comment requirements.
- Follow through on any environmental commitments made as a condition of granting a use authorization.

ENVIRONMENTAL PROTECTION: ECOLOGICAL FUNCTIONS

Discussion on environmental protection: ecological functions

"Ecological functions" means all of the natural functions, processes and resources which provide ecosystem integrity, including:

- Habitat functions, including the areas, resources, other species, and the physical, chemical and biological processes that support the life history stages of a given species.
- Hydrogeomorphic functions, such as tidal effects and sediment erosion, movement and deposition.
- Hydrogeological processes, such as surface and groundwater storage and discharge, and energy dissipation.
- Biogeochemical processes, such as nutrient and carbon cycling.

Some ecological functions are especially critical and in need of greater attention and protection. These "critical ecological functions" include:

- Functions that support endangered, threatened, rare or highly sensitive or vulnerable species, notably the recently listed threatened salmon populations.
- Ecological functions with recognized ecological value due to high biological productivity, scarcity, support of a crucial life history stage of a species, provision of a limiting factor within an ecosystem, or provision of crucial connections or linkages within an ecosystem.
- Geographically unique habitat that supports one or more isolated species.

The goal of ensuring environmental protection requires both no net loss of habitat and, furthermore, a net gain of ecological functions and environmental values on state-owned aquatic lands. Rather than merely seeking to prevent further degradation, every proposed new approval, renewal or change in an authorized use of state-owned aquatic lands should be considered an opportunity to enhance the aquatic environment.

Requiring merely no loss of ecological functions from any given use of aquatic lands likely will fail to achieve no loss for the bay or ecosystem as a whole because of:

- The uncertain and cumulative environmental impacts of many human activities and developments;
- The ineffectiveness of some efforts to mitigate for these impacts; and
- The continuous slow degradation of aquatic habitat due to many causes beyond the department's immediate control.

Therefore, the department's intent is to issue use authorizations which not only keep from degrading aquatic ecological functions, but instead actually will enhance them. This way, in the long-term and in the broadest sense, the department will be able truly to ensure environmental protection on state-owned aquatic lands.

ENVIRONMENTAL PROTECTION: LEASES

Discussion on environmental protection: leases

The department's goal is to maintain, protect, and restore the environmental integrity of state-owned aquatic lands. Leases and other use authorizations can be tools to assure that activities that occur on state-owned aquatic lands are conducted in an environmentally responsible manner. SEE ALSO: Use authorizations.

Ensuring environmental protection means that there sometimes will be cases when the department simply does not authorize uses of state-owned aquatic lands because those uses would cause unacceptable adverse environmental impacts. In all cases, proposed uses must cause the least possible impact to environmental resources before receiving authorization. The use authorization decision must include consideration of alternatives which do not involve state-owned aquatic lands at all. For example, even a proposed water-dependent small watercraft repair facility should be reviewed to see if it can be located on adjacent uplands — by lifting the boats from the water — and if thereby the discharge of paints, oil or other pollutants from the repair facility can be prevented from entering the water.

Protecting environmental resources will often require significant redesign or rethinking of a proposed use or development. Staff should not hesitate to require conditions in use authorizations when they are necessary to address environmental concerns. The department's primary obligation is always to ensure environmental protection, not to ensure the convenience of any given applicant's use of state-owned aquatic lands.

During review of use authorization applications, the department must clearly understand and describe any remaining uncertainties and the severity of any environmental risks, financial risks from environmental issues, and related concerns. In particular, this review must address any potential for sediment contamination and resulting financial liability for cleanup. In all cases, the tenant is to remain liable for any environmental damages resulting from the tenant's or a sublessee's actions.

Furthermore, approving a proposal on environmental grounds is not equivalent to authorizing the use itself. The department must make a determination on whether the use is otherwise appropriate for state-owned aquatic lands, in general and for a given parcel, in addition to determining whether the environmental impacts it may cause are acceptable. Finally, any remaining adverse environmental impacts must be properly mitigated.

As much as possible, staff should be involved with the applicant in the early design of a proposed project, both before and after the permit process commences. Early involvement in project design may often be the best opportunity to avoid adverse environmental impacts to state-owned aquatic lands with the least conflict and contentiousness.

Environmental resources and ecological functions can be expected to thrive best without disturbance. Therefore, when significant uncertainty exists, the department will not authorize proposals with potential significant adverse environmental impacts until the uncertainty can be resolved. Staff should encourage those applicants who insist their proposal can be undertaken without adverse impacts to provide the department with the evidence attesting to that fact.

Whenever feasible and appropriate, the Division will prepare more precise, quantifiable standards for particular environmental issues – for example, to determine how much shading of the water will cause what degree of impacts on aquatic species living below. The principles of environmental protection described in this manual, however, are not dependent on quantification or extensive scientific study of each individual proposed use. Instead, they are to be implemented based on basic ecological principles, the best scientific information available at the time, and the judgement and common sense of the department's professional staff.

ENVIRONMENTAL PROTECTION: RISK ASSESSMENTS

Discussion on environmental protections: risk assessments

One way of approaching environmental concerns is to conduct an ecological risk assessment. An ecological risk assessment is a defined process that evaluates the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors. Ecological risk assessment is used to systematically evaluate and organize data, information, assumptions and uncertainties to help understand and predict the relationships between stressors and ecological effects in a way that is useful for decision-making. An assessment may involve chemical, physical or biological stressors, and one stressor or many stressors may be considered.

A risk assessment process does not make management decisions, but it can accomplish four goals:

- Involve risk managers, risk assessors and stakeholders.
- Create an agreed-upon set of endpoints, management goals, and understanding of the ecosystem and its interactions.

- Address concerns about cumulative impacts.
- Communicate risk to the resource to decision-makers.

This type of assessment allows identification of high risk activities so that appropriate adaptive management can be devised to minimize risk. It also allows for examining various "what-if" trade-off scenarios between different activities. These assessments can be used to predict the likelihood of future adverse effects or evaluate the likelihood that effects are caused by past exposure to stressors.

The department must use all available means to reduce environmental risks from the uses of state-owned aquatic lands. The simplest means to do this can include:

- Gathering more information.
- Requiring appropriate studies (perhaps funded by the applicant).
- Shortening contract duration.
- Establishing contract re-opener clauses, such as coinciding with regulatory environmental reviews, in case of unforeseen environmental concerns.
- Requiring indemnification, insurance and bonding.
- Denying an application for use of state-owned aquatic lands, when environmental risks cannot be avoided in any other way.

The department will work to develop comprehensive methods and procedures for conducting appropriate ecological risk assessment. In the absence of detailed technical assistance, staff should apply their best professional judgement and err on the side of caution when considering use authorizations which may adversely affect the environment.

Exchanges and acquisitions

RCW 79.90.457: Authority to exchange state-owned tidelands and shorelands--Rules--Limitation.

The department of natural resources may exchange state-owned tidelands and shorelands with private and other public landowners if the exchange is in the public interest and will actively contribute to the public benefits established in RCW 79.90.455. The board of natural resources shall adopt rules which establish criteria for determining when a proposed exchange is in the public interest and actively contributes to the public benefits established in RCW 79.90.455. The department may not exchange state-owned harbor areas or waterways.

WAC 332-30-170: Tideland and shoreland exchange.

The department will use this rule when it considers exchanging tidelands or shorelands with private individuals or public entities pursuant to RCW 79.90.457. The department may exchange these aquatic lands if the exchange is in the public interest and will actively contribute to the public benefits established in RCW 79.90.455. Those benefits are: Encouraging direct public use and access; fostering water-dependent uses; ensuring environmental protection; utilizing renewable resources; and generating revenue in a manner consistent with these benefits. The department may not exchange state-owned harbor areas or waterways.

- (1) Eligibility criteria. The department may consider exchanging ownership of tidelands or shorelands with private and other public landowners if the proposed exchange meets the eligibility criteria set forth in (a) and (b) of this subsection.
 - (a) The economic values of the parcels must be equal or the exchange must result in a net economic gain to the state. The economic value must be determined by a qualified independent appraiser and/or economist and accomplished through a methodology accepted by the department.
 - (b) The tidelands or shorelands to be conveyed into state ownership must abut navigable water.
- (2) Evaluation criteria. Subject to available funding, the department will evaluate eligible proposed exchanges according to the following criteria. The department will give priority and preference to proposed exchanges which, in the department's judgment, are in the public interest by providing the greatest public benefits, the least negative impacts, and the most appropriate resolution of

other considerations, as set forth in (a), (b) and (c) of this subsection.

- (a) The tidelands or shorelands to be conveyed into state ownership must have one or more of the following characteristics:
 - (i) Be or abut a critical and/or an essential habitat identified by the National Marine Fisheries Service, state natural resource management agency(s), and/or the United States Department of Fish and Wildlife;
 - (ii) Be or abut a critical area identified by jurisdictions under chapter 36.70A RCW;
 - (iii) Be an area beneficial to sediment transport and/or nearshore habitat function identified by the National Marine Fisheries Service, state natural resource management agency(s), and/or the United States Department of Fish and Wildlife;
 - (iv) Be actively used or abut a parcel used in the commercial production of food or fibre or other renewable resource production (for example, commercial grade beds of shellfish and aquaculture facilities);
 - (v) Abut a state or national wildlife refuge;
 - (vi) Abut an upland parcel with public upland ownership, easements, or some other formalized agreement that would allow direct public use of and access to the water;
 - (vii) Be actively used or abut parcel(s) actively used for water-dependent uses or allow for water dependent use; (viii) Contain a historic or archaeological property listed on or eligible to be listed on the National Register of Historic Places: or
 - (ix) Generate or have the potential to generate higher revenues than the parcel being transferred out-of-state ownership in a manner consistent with the benefits listed in RCW 79.90.455.
- (b) The proposed exchange must have beneficial or no negative impacts on:
 - (i) Navigation;
 - (ii) The diversity and health of the local environment including the production and utilization of renewable resources:
 - (iii) The quantity and quality of public access to the waterfront;

- (iv) Treaty rights of federally recognized tribes. The department will solicit comments on a proposed exchange from affected tribes; and
- (v) Hazardous waste and contaminated sediments liability issues.
- (c) The following issues must also be considered:
 - (i) Consistency with plans and development guidelines of public ports, counties, cities and other local, state, and federal agencies;
 - (ii) The relative manageability of the tidelands or shorelands to be exchanged including, but not limited to, the effect of the exchange on management costs, liability and upland access, and the relative proximity of the tidelands or shorelands to be exchanged to other state-owned shorelands or tidelands: and
 - (iii) The cumulative impacts of similar exchanges on water dependent uses, nonrenewable and renewable natural resources, and total aquatic lands acreage managed by the department.
- (3) Recommendation to the board of natural resources. The department will provide its recommendations to the board of natural resources in writing, addressing whether the exchange meets the criteria in this rule and the positive and negative impacts of the exchange on public benefits and resources. The department will provide copies of its recommendations to the proponent of the exchange. In general, an exchange should only be recommended by the department and approved by the board of natural resources when, in the department's and the board's judgment, the public benefits associated with the exchange outweigh the negative impacts or other diminution in public benefits.

Discussion on exchanges and acquisitions

The department is authorized to exchange state-owned tidelands and shorelands with private and public landowners if the exchange is in the public interest and actively will contribute to the public benefits of aquatic lands. However, the department cannot exchange state-owned aquatic lands within harbor areas or waterways, and cannot exchange bedlands.

The Board of Natural Resources must approve exchanges recommended by the department. The board adopted numerous criteria which must be met before tidelands or shorelands can be exchanged. The general goal with any exchange should be to ensure that the parcel of land coming into state ownership will provide greater public benefits and functions than the parcel leaving state ownership. An exchange which results in acquisition of land which enhances public access would be acceptable as long as the criteria listed above are met. For example, it would not be acceptable to dispose of shorelands which abut navigable waters in order to acquire shorelands which do not abut navigable waters, even if public access were significantly enhanced.

The bottom line is that exchanges of shorelands and tidelands have very specific and narrow criteria to meet, and any proposed exchange must meet this criteria to be considered by the board. Proposals from staff to exchange state-owned aquatic lands must be reviewed by the Region, Division, and Executive Management.

Land managers should be on the lookout for tideland and shoreland properties which are good possibilities for exchange or acquisition. Ideally, if someone inquires about exchanging for a particular piece of state-owned aquatic land, the department already should have ideas about lands it would be interested in receiving in exchange. The Division will receive suggestions and compile a list of aquatic lands that would make valuable additions to the public land base.

The department also is able to acquire aquatic lands as funds are available. Lands acquired should meet the same general criteria as lands to be received in exchange. In particular, land acquisitions may be valuable for gaining a key private parcel within a surrounding block of state-owned aquatic lands, making ecological connections through a watershed, protecting a critical natural area as an aquatic reserve, or ensuring public access.

Exotic species

Discussion on exotic species

There are at least 52 known non-native species in the saltwater and brackish water in Puget Sound. Non-native species have been known to profoundly affect ecosystems by disrupting food webs and displacing native species, although the effects of most introductions are not well understood. Because of a lack of natural predators or competitors, these species can spread rapidly. The highest profile exotic species in the aquatic environment are Spartina and green crabs.

The primary ways by which exotic species enter state waters are through shipping, aquaculture, research and aquaria industries. In shipping, for example, ships in foreign ports take on ballast water to replace lost weight. The ships then return to Washington and dump the ballast in state waters, potentially introducing planktonic larvae into the aquatic system.

As a result of accidental release from aquaculture projects, Atlantic salmon are thought to be reproducing in the wild in British Columbia. The potential threat is that they will compete with wild stocks. For this reason, when authorizing net pens the department must ensure that adequate control mechanisms are in place to minimize release of Atlantic salmon. SEE ALSO: Aquaculture.

Research and control efforts tend to focus on the more obvious exotic species, such as Spartina and green crab, rather than on small organisms like amphipods whose effects are more subtle. But amphipods are a major food source for salmon and other species, so shifts in their populations could dramatically alter the food web and possibly lead to a collapse in the ecosystem. Management of exotic species must focus on practices that prevent or minimize introduction of new species. It is very expensive, and often not possible, to eradicate non-native species once they are established.

EXOTIC SPECIES: EUROPEAN GREEN CRAB

Discussion on exotic species: European green crab

European green crabs are found in saltwater. They eat juvenile clams, oysters and Dungeness crabs, and pose a significant threat to shellfish aquaculture. They spread quickly and widely and out-compete other crabs. European green crabs have now been found in Willapa Bay and Grays Harbor, and are suspected to be elsewhere in Washington. If green crabs become firmly established in Washington, they may have a significant impact on the state's clam and oyster culture industries, as well as the commercially important Dungeness crab fishery.

EXOTIC SPECIES: SPARTINA

Discussion on exotic species: Spartina

Spartina is a large grass which grows in saltwater tide flats and estuaries. It was intentionally introduced to Washington's northern Puget Sound waters to stabilize mudflats for agriculture and for waterfowl. Another variety of Spartina was accidentally introduced in oyster packing material in Willapa Bay around the turn of the century. Spartina is native to the east coast, but has become established along parts of the Pacific coastline, especially in Willapa Bay where it is an aggressive and dominant plant.

Spartina grows in mud, sand and cobble where tides move in and out each day, and where little or no competing vegetation normally grows. As the seedlings develop into circular patches, known as "clones," they stabilize silt moved by tidal action. This raises the clones' elevation above the adjacent tideflat. As clones grow and merge, the amount of silt collected is enough to change the site into a high meadow. This process eliminates native eelgrass and highly productive tideflats, destroying habitat for shore birds and wading birds, waterfowl, fish and other wildlife.

The department has a substantial program for Spartina control, operated by the Division. This program conducts physical removal of Spartina plants and research on biological controls.